

LEVIT, V.G.

Materials on the catamnesis of the simple form of schizophrenia.
Zhur. nevr. i psikh. 65 no.1:88-97 '65. (MIRA 18:2)

1. Otdel katamnezov (zaveduyushchiy - doktor med. nauk N.M.
Zharikov) Instituta psichiatrii AMI SSSR, Moskva.

ACC NRI AP6032620

(N)

SOURCE CODE: UR/0126/66/022/003/0415/0419

AUTHOR: Yesin, V. O.; Levit, V. I.; Romanov, Ye. P.; Smirnov, L. V.

ORG: Institute of the Physics of Metals, AN SSSR (Institut fiziki metallov AN SSSR)

TITLE: Orientation, purity and perfection of molybdenum single crystals grown by electron-beam zone melting

SOURCE: Fizika metallov i metallovedeniye, v. 22, no. 3, 1966, 415-419

TOPIC TAGS: single crystal, molybdenum single crystal, single crystal growing, electron beam ~~wave~~ melting, single crystal orientation, single crystal purity, single crystal structure, MOLYBDENUM, METAL ZONE MELTING

ABSTRACT: Molybdenum single crystals, 3 mm in diameter and 60—120 mm long, were grown by the zone-melting method in a vacuum of 10^{-6} — 10^{-7} mm Hg with an electron-beam heat source. The initial material, polycrystalline commercial-grade (99.8%-pure) molybdenum wire had a ratio of resistivities at 285 and 4.2K equal to 20. The orientations of the single crystals was found to depend on the rate of growing or on the rate of molten zone travel. No clear relationship was established between the single crystal perfection (the maximum disorientation angle between the elements of macromosaic substructure, $\max\theta'$) and the melting-zone speed at which the crystals were grown. A clear relationship, however, was found between the crystal perfection ($\max\theta'$) and its purity ($\rho_{285K}/\rho_{4.2K}$). The relationship can be empirically expressed

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as: the more perfect the crystal, the less pure it is. Increasing the zone refining effectiveness increased the angle of general disorientation of the fragments of macromosaic substructure of the crystals. Very pure molybdenum single crystals were obtained after three passes at medium speeds (1.2—1.8 mm/min). The maximum value of the $\rho_{285K}/\rho_{4.2K}$ ratio was 5000. The respective values for 2 passes and 1 pass were 2200 and 980; V. Y. Startsev and N. V. Volkensteyn are thanked for the electric resistivity measurements. Orig. art. has: 3 figures.

SUB CODE: 11/ SUBM DATE: 10Sep65/ ORIG REP: 003/ OTH REP: 004

Card 2/2

LEVIT, V.N.

Comparative evaluation of various forms of complex therapy for
patients with traumatic iridocyclitis. Vest. oft. 73 no. 2:12-
15 Mr-Ap '60. (MIRA 14:1)
(IRITIS)

LEVIT, V.

Congress on industrial methods of building pile foundations in
housing construction. Osn., fund. i mekh. grun. 3 no. 5:31-32
'61. (MIRA 14:11)

(Foundations)

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929620009-4

LEVIT, V.S.

DECEASED
C' 1961

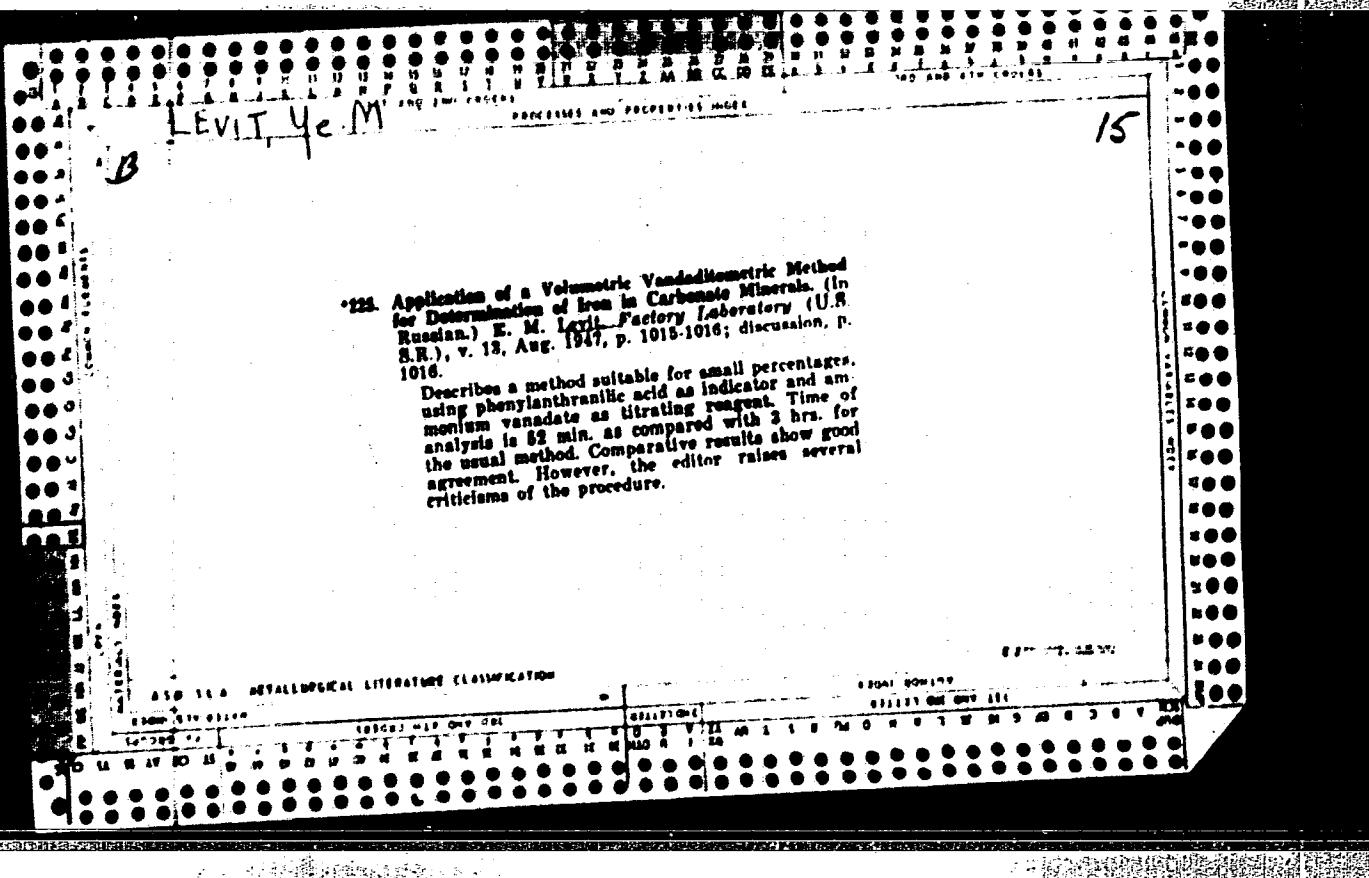
1962/5

SEE ILC

SURGERY

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CM LEVIT. 4e M

Rapid determination of calcium in siderite or dolomites containing siderite. B. M. Levit. Zaryadkayt Lab. 13. 1173-4 (1949).—Evap. the HCl soln. of the sample to 5-7 ml., dil. with 50 H₂O, and add 75 ml. of hot 25% NH₄OAc soln. Add 3 g. NH₄ oxalate, boil 5 min., filter, and wash. Add 1% NH₄OAc. Dissolve the CaC₂O₄ in 10% H₂SO₄, and titrate at 70° with standard KMnO₄. G. M. Kondratenko

Subject : USSR/Electricity

AID P - 1921

Card 1/1 Pub. 29 - 1/31

Authors : Kachan, I. K., Anisimov, A. P., Marchenko, D. A.,
and Levit, Ye. S., Engineers

Title : Use of reinforced concrete supporting structures in
building 35-kv transmission lines

Periodical : Energetik, 3, 1-4, Mr 1955

Abstract : The authors give an account of the experience obtained
by the technical personnel of the Trust
"ENERGOMONTAZHNEFT" in producing concrete poles and
in building transmission lines with them. They give
technical details of production and construction.
Two photographs, 1 drawing, and 2 tables.

Institution: "ENERGOMONTAZHNEFT!"

Submitted : No date

LEVIT, Ye.TS.

Nurse of a shop in an industrial enterprise. Med. sestra 19
no. 6:31-33 Je '60. (MIRA 14:1)

1. Is Gprodskoy bol'nitsy No.34, Moskva.
(NURSES AND NURSING) (INDUSTRIAL HYGIENE)

LEVIT, Ye.Ya., inzh.

Separator for removing clay from crushed stone and gravel. Mekh.
stroi. 19 no.3:18-19 Mr '62. (MIRA 15:3)
(Separators (Machines)) (Stone, Crushed) (Gravel)

DOBRYKIN, I.M.; LEVIT, Ye.Ya.

Designing plants for the sand and gravel industry. Prom.
stroi. 40 no.7:20-22 J1 '63. (MIRA 16:10)

1. Odesskiy Vsesoyuznyy institut po proyektirovaniyu organizatsiy
energeticheskogo stroitel'stva.

10.-11/81

NOTES: Bushuyev, A. N., Tabunov, K. A. and Levin, Ye. I.

TITLE: Organization of production quality control.
(Ob organizatsii kontrola kachestva produktov).

PERIODICAL: Metallurg., 1953, No.3, p. 32-33 (USSR).

ABSTRACT: This is a discussion of an article of the same title by N. P. Inosentsev, Ya. I. Sokol, I. F. Rynev, D. A. Tarasenkov and S. I. Zamyatin (Metallurg., 1957, No.9) with which they are in general agreement. They divide the functions of a technical control department into three categories. The first is supervision to insure adherence to the required production technology and it is suggested that with good works discipline this category can be dispensed with, the exception being supervision of sampling for quality-control tests. The second category is essentially record keeping of intermediate operators (e.g. charging and discharging of materials in reheating furnaces) and the need for independent personnel here is admitted since the data are not recorded automatically. The third category is the inspection of incoming materials and the need for this too is admitted. The authors go on to describe the reorganization, based on these views, of the

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Organization of production quality control.

130-3-16/21

technical control department at the Nizhne-Tagil'skiy Metallurgical Combine. This made it possible to reduce the number in the department by 17%. In addition to a reduction in the number of control points, the number of sections of the department was reduced from 15 to 7 by amalgamation, the controllers' working day was better organised and some combination of trades was adopted. The authors suggest that technical-control personnel recruitment policy needs revision to get more active and better qualified persons and that their pensionable age should be reduced from its present value of 60 (compared with 55 for production and finishing workers).

ASSOCIATE : Nizhne-Tagil'skiy metallurgicheskiy kombinat
(Nizhniy-Tagil Metallurgical Combine)

AVAILABLE: Library of Congress.

Card 2/2

LEVIT, Z.: VDOVICHENKO, K.

Measuring labor productivity in instrument manufacturing
Biul. nauch. inform.; trud i zar. plata 3 no. 1:3-10 '60.
(MIRA 13:6)

(Instrument industry--Labor productivity)

LEVIT, Z. I KIRNARSKAYA, K.

Methodology for planning future growth in labor productivity.
Sots. trud 7 no.4:24-32 Ap '62. (MIRA 16:1)
(Instrument industry—Labor productivity)

LEVIT, Z.I., dots.

Organization of field practice for students and their use in the
rural public health service. Zdrav. Res. Feder. 3 ne.5:16-20 My
'59. (MIRA 12:7)

1.Iz Saratovskogo meditsinskogo instituta (dir. - dots. B.A. Nikitin).
(MEDICINE--STUDY AND TEACHING)

BORISOV, V.I.; LEVIT, Z.Yu., inzh.; KALININ, V.Z., inzh.; BROVKIN, M.G.,
inzh.; TOSATSOV, N.V., inzh.; ZHIGACHEVA, T.F., inzh.; LOBANOV,
V.S., inzh.; ALIMOV, M.F., inzh.; VIKSMAN, I.M., inzh.; LAZAREV,
V.Ya., inzh.; ZALEVSKAYA, L.V., tekhnik; SHCHETVINA, R.F., tekhnik;
SOKOLOVSKIY, I.A., red.; SKALAGINOV, A.A., vedushchiy red.

[Special and basic equipment of mechanical assembly shops in
instrument plants] Nestandardnoe oborudovanie i orgosnastka mekha-
nicheskikh sborochnykh tsekhov priborostroitel'nykh zavodov. Mo-
skva, Otdel nauchno-tekhn. informatsii, 1959. 158 p.

(MIRA 15:4)

(Instrument industry—Equipment and supplies)

LEVIT, Z.Yu.; MITIN, V.M.

Mechanization and automation of processes in the manufacture of
basic sectional joints. Priborostroenie no.9:27-29 S '62.
(MIRA 15:9)
(Machine-shop practice) (Automatic control)

Levit-Gurevich, G.Ye.

AUTHORS Shapiro, M.M., Levit-Gurevich, G.Ye. 32-8-4/61
TITLE The Phase Analysis of Iron-Nickel-Titanium Alloys.
(Fazovyy analiz zhelezonikel'titanovykh splavov.)
PERIODICAL Zavodskaya Laboratoriya, 1957, Vol. 23, Nr 8,
pp. 904-905 (USSR)
ABSTRACT It was recently found that the composition of the
electrolyte exerts an influence in the anode solution for
the purpose of separating dispersion phases in various
alloys. It has also to be taken into account that other
factors, e.g. temperature, influence the quantitative
separation of disperse and especially of the inter-
metallic phases. The paper describes the effect produced
by temperature on the separation of the intermetallic
phase in Fe-Ni-Ti alloys with different content of
titanium. It is pointed out in this connection that the
effect of temperature on the maintenance of the inter-
metallic phase of the electrolysis has not yet been in-
vestigated. By means of the tables the chemical structure
of the intermetallic phase in Fe-Ni-Ti alloys with
different content of titanium is treated. The result of
the chemical analysis of the carbide precipitation of the
solution which contains the intermetals shows that the
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32-8-4/61

The Phase Analysis of Iron-Nickel-Titanium Alloys.

precipitation contains titanium carbide and iron carbide, while the solution contains nickel, iron and titanium. In the roentgenogram only the lines of the hexagonal phase ϵ -Ni₃Ti were determined beside carbides, but no lines of Fe₃Ti. Therefore it may be concluded that the iron is included in the Ni₃Ti phase, while the intermetallic binding (NiFe)₃Ti is contained in the solution.
(2 tables and 1 illustration)

ASSOCIATION: Central scientific research institute for ferrous metals.
(Tsentralnyy nauchno-issledovatel'skiy institut chernoy metallurgii)

AVAILABLE: Library of Congress.

CARD 2/2

VASIL'YEV, B.P.; LEVITA, D.Ya.

Hydraulic control apparatus for performing automatic operations
by a group of hydraulic cylinders in required sequence. Kuz.-shtam.
proizv. 4 no.7:30-33 J1 '62. (MIRA 15:?)
(Hydraulic control)

LEVITA, R., lektor; SARAFANOVA, A., inzh.

Brigade piecework at the Kaluga Sewing Factory. Sots. trud. 4
no.4:102-104 Ap '59. (MIRA 12:6)

1. Kaluzhskiy gorkom Kommunisticheskoy parti Sotetskogo Sovyza.
(Kaluga—Clothing industry) (Wages)

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929620009-4

LEVITAN, A., kineoperator

Color photography. Sov.foto 22 no.11:25-26 N '62. (MIRA 16:1)
(Color photography)

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929620009-4"

**ARTYUSHIN, L.F.; SHUBINA, G.Ye.; ANTONOV, S.M.; KIRILLOV, N.I.; LEVITAN,
A.Yu.; MIKOSHA, V.V.; PLUZHNIKOV, B.Y.; IOFIS, Ye.A., kand.tekhn.
nauk, red.; TIKLESHEV, A.N., red.; CHICHERIN, A.N., tekhn.red.**

[Color photography] TSvetnaia fotografiia. Pod red. E.A.Iofisa.
Moskva, Gos.izd-vo "Iskusstvo," 1958. 208 p. (Biblioteka foto-
liubitelia, no.12) (MIRA 12:4)

(Color photography)

LEVITAN, A.

Laying hollow ceramic brick walls by the "Piaterka" building crew.
Na stroi. Mosk. 1 no.6:15-17 Je '58. (MIRA 11:9)

1.Rukovoditel' brigady instruktorov peredovykh metodov truda TSen-
tral'noy nauchno-issledovatel'skoy bazy Glavmosstroya.
(Bricklaying)

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929620009-4

LEVITAN, A.

Remarks on composition. Sov.foto 18 no.12:11-14 D '58.
(MIRA 11:12)
(Photography)

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929620009-4"

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929620009-4

LEVITAN, A.

Pungency of perception. Sov. foto 19 no.5:12-18 My '59.
(MIRA 12:9)
(Photography--Exhibitions)

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929620009-4"

ARTYUSHIN, L.F.; SHUBINA, G.Ye.; ANTONOV, S.M.; KIRILLOV, N.I.;
LEVITAN, A.Yu.; MIKOSHA, V.V.; PLUZHNIKOV, B.P.; IOFIS,
Ye.A., kand. tekhn.nauk, red.; POMIN, A.A., red.; CORINA,
V.A., tekhn. red.

[Color photography] TSvetanaia fotografiia. Izd.2., ispr. 1
dop. Pod red. E.A. Iofisa. Moskva, Iskusstvo, 1961. 228 p.
(Biblioteka fotoliubitelia, no.13) (MIRA 16:5)
(Color photography)

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929620009-4

LEVITAN, R. B.

The gas-producer tractor KhTZ-T2G 2. izd. Moskva, Sel'khozgiz, 1942

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CIA-RDP86-00513R000929620009-4"

SOV/94-58-11-5/28

AUTHOR: Levitin, B.I., Engineer
Kipriyanov, I.V., Candidate of Technical Sciences

TITLE: Experience of Modernising Boilers Shukhov-Berlin
Type A-7 (Opyt modernizatsii kotlov Shukhova-Berlina A-7)

PERIODICAL: Promyshlennaya Energetika, 1958, Nr 11 pp 13-16 (USSR)

ABSTRACT: Until 1950 the boiler house of the Leningrad Okhtenskiy Chemical Combine was equipped with three Shukhov-Berlin type A-7 boilers with individual economisers each of 500 sq.m. The boilers had no super-heaters. The average output was 5 tons per hour per boiler and the efficiency was of the order of 63%. One boiler set was reconstructed under the guidance of Engineer B.I. Levitan, the grate surface being raised to 9.2 sq.m. and the furnace volume to 39.4 cu.m. A brief account is given of the changes made. On the third trial run the boiler was loaded to 10-12 tons per hour at a pressure of 11 atm and a serious accident occurred after 18 hours operation. Extensive tube failures were found in the screens. It was established that the accident occurred because of cavitation in the water supply tubes of the screen.

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SOV/94-58-11-5/28

Experience of Modernising Boilers Shukhov-Berlin Type A-7

The changes that were made to prevent this from occurring again are described. After these changes were made no further trouble was experienced and after the boiler had been operating stably for a considerable time under all the operating conditions found in practice a partial test was made on the boiler to determine the conditions of stable circulation in the screen circuits and to measure the throughput of various screens. Data on the load distribution between the screens and the main boiler circuit are given in Table 1. Analysis of the data given in Table 1 shows that further increase in the output of the boiler could be achieved. Tests were also made to determine the quality of steam delivered by the boiler. Further modernisation of the boiler was carried out in the summer of 1953 and cross-sectional drawings of the boiler are given in Figs.1 and 2, the boiler was provided with a back-screen. The alterations made are briefly described. After the boiler had been adjusted and stability of operation had been checked on various working conditions balancing tests were made, the

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SOV/94-58-11-5/28

Experience of Modernising Boilers Shukhov-Berlin Type A-7

results of which are given. Three years have now passed since the first boiler was modernised and now all the boilers have been modernised by this method and are operating satisfactorily. The actual steam output of the boilers in 1956 is given in Table 2. The loads given in Table 2 correspond to production requirements and not to the possibilities of the boilers. It is concluded that for expenditure of about 180,000 roubles the output of the Shukov-Berlin type A-7 boiler can be increased to 14 - 16 tons per hour. The reconstructed evaporative circuit operates stably under all operating conditions. The steam produced by the reconstructed boiler is drier by 1 - 1.5%. There are 2 figures and 2 tables.

Card 3/3

LEVITAN, B.M.

Ob odnom obobshchenii neravenstv S.N. Bernsteina i N. Vohr'a. DAN, 15 (1937), 169-172.
Pro ryadi Fourier odnogo klasu mayzhe periodicheskikh funktsiy. Khrk., zap. matem. T-VA (4), 14 (1937), 105-116. Novoye obobshchenie rochti periodicheskikh funktsiy Bohr'a. Khrk., zap. matem. T-VA (4), 15:2 (1938), 3-34. Ueber eine Verallgemeinerung der stetigen fast-periodischen Funktionen Von H. Bohr. Ann. of Math., 40 (1939), 805-815. O lineynykh differentsial'nykh uravneniyakh s rochti periodicheskimi koefitsiyentami. DAN, 17 (1937), 285-286. Novoye obobshchenie rochti periodicheskikh funktsiy N. Bohr'a Khrk., Zap. matem. T-VA (4), 15:2 (1938), 3-32. Obobshchenie operatsii sdvigov syyazi s pochti periodicheskimi funktsiyami. DAN, 26 (1940), 639-642. Die Verallgemeinerung der Operation der Verziehung im Zusammenhang mit fast-periodischen Funktionen. Matem. S.B., 7 (49), (1940), 449-478. Zakon dvoystvennosti dlya obobshchennoy operatsii sdvigov. DAN, 17 (1945), 401-403. K teorii unitarnykh predstavleniy lokal'no kompaktnykh grupp. Matem. S.B., 19 (61), (1946), 407-423. Differentsial'nyye uravneniya Ahturmaliuvillya na volosii i teorema Plan-shelya. DAN, 52 (1946), 483-486.

SO: Mathematics in the USSR, 1917-1947
edited by Kurosh, A.G.,
Markushevich, A.I.,
Fashevskiy, P.K.
Moscow-Leningrad, 1948

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929620009-4

LEVITAN, B. M.

"Concerning Nearly Periodic Functions Appertinent in the Strict Sense of Class W," Dok. AN 22, No. 5, 1939.

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929620009-4"

LEVITAN, B.

"On the Fourier Series of Generalized Almost Periodic Functions," Dok. AN
22, No. 9, 1939.

Math. Inst. of the Khar'kov State University.

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929620009-4

LEVITAN, B.

"Generalized Operation of Change of Position in Connection with Nearly Periodic Functions," Dok. AN 26, No. 7, 1940.

Inst. of Math. & Mech., University of Khar'kov.

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"APPROVED FOR RELEASE: 07/12/2001

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LEVITAN, B.

"Normed Rings Generated by the Generalized Operation of Translation,"
Dok. AN 47, No. 1, 1945.

F. Dzerjinsky Artillery Acad. of the Red Army.

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929620009-4"

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929620009-4

LEVITAN, B.

"The Theorem of the Representation of Positively Definite Functions for
the Generalized Operation of Translation," Dok. AN 47, No. 3, 1945.

F. Dzerjinsky Artillery Acad. of the Red Army.

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929620009-4"

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929620009-4

LEVITAN, B.

"Piancherel's Theorem for the Generalized Translation Operator,"
Dok. AN 47, No. 5, 1945.

F. Dzerjinsky Artillery Acad. of the Red Army.

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CIA-RDP86-00513R000929620009-4"

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CIA-RDP86-00513R000929620009-4

LEVITAN, B.

"The Duality Law for the Generalized Operation of Translation," Dok. AN
47, No. 6, 1945.

P. Dzerjinsky Artillery Acad. of the Red Army.

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Uppala, 1923) to study kernels of the form $T_t f(t)$, where T^* is a (noncommutative) generalized translation (Lewitan, Ann. C. R. (N.S.) 47, 1-6, 1915; see also Lewitan, 1927).

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LEVITAN, B. M.

"Generalized Nearly-Periodic Functions," Matemat. Sbor. 24, No. 3, Moscow, 1947.

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"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929620009-4

LEVITAN, R.M.

'A Generalization of Almost Periodic Functions' Matematicheskiy Sbornik 1949

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APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929620009-4"

"APPROVED FOR RELEASE: 07/12/2001

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CIA-RDP86-00513R000929620009-4

LEVITAN, B. M.

"Expansion in Bessel Functions," (Lecture, Meetings of the Moscow Mathematical Society: 9, 16, 23 May 1950.

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CIA-RDP86-00513R000929620009-4"

"APPROVED FOR RELEASE: 07/12/2001

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1. Let L_1 be a linear differential operator with coefficients in terms of the eigenfunctions of $L_1(y)$ for a finite interval

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LEVITAN, B. M.

PA 187753

USSR/Mathematics - Fourier Series and Mar/Apr 51
Integrals

"Expansion of Bessel Functions Into Fourier Series
and Integrals," B. M. Levitan

"Uspekhi Matemat. Nauk" Vol VI, No 2, pp 102-143
Levitin expounds various problems relating to the
expansion of Bessel functions into Fourier series,
Fourier integrals, and Fourier-Stieltjes integrals.
G. Titchmarsh, "Eigenfunctions Expansions," Oxford,
1946. Headings: Fourier-Hankel Integral Expansion;
Riemann's Method; Euler-Poisson Equation; Poisson
Formula; Taylor-Delsartes Formula; Properties of
Functions.

187753
CIA

USSR/Mathematics - Fourier Series and Mar/Apr 51
Integrals (Contd)

Operators T^Y ; Operators of Sonin and Poisson;
Fourier-Stieltjes-Bessel Integrals; Integral Re-
presentation of Generalized Positive Definite
Functions.

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RECORDED
BY: [redacted]
IN: [redacted]
ON: [redacted]
AT: [redacted]
IN: [redacted]
OF: [redacted]
IN: [redacted]
BY: [redacted]
IN: [redacted]
TERMS: [redacted]
VIA: [redacted]
ROUTED: [redacted]

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12 (45) , and 12 (5)
the sine-function or with Bessel functions.
In addition to simplicity the use of eigen-function expansions
is used to simplify the analysis of the problem.

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CIA-RDP86-00513R000929620009-4"

LEVITAN, B. M.

Mathematical Reviews
Vol. 15 No. 4
Apr. 1954
Analysis

Levitán, B. M. Remark on a theorem of V. A. Marčenko.
Trudy Moskov. Mat. Obšč. 1, 421-422 (1952). (Russian)

It is shown how the essential part of the proof of the asymptotic formula for the spectral function given by Marčenko [see the preceding review] follows from a special Tauberian theorem due to Wiener. E. A. Coddington.

(2)
math

8-24-54

LL

USER/Mathematics - Heat Conduction, Diffusion
May/Jun 52

"Some Boundary-Value Problems for the Equation of Turbulent Heat-Conduction," G. I. Barenblatt, B. M. Levitan

"Iz Ak Nauk, Ser Matemat" Vol XVI, No 3, pp 253-280
Studies expansion of functions, given within the interval (0,oo) into an integral of the Fourier integral type according to eigenfunctions of the eq "y"'' + λ y''^2 $q(x)y$ = 0 under the assumption that the function $q(x)$ satisfies specified conditions.

217768

The results obtained are applied to the soln of the eq of heat-conduction or diffusion in turbulent flow. Received 1 Nov 51. Submitted by Acad S. N. Bernshteyn.

217768

LEVITAN, B. M.

Mathematical Reviews
Vol. 15 No. 4
Apr. 1954
Analysis

9-24-94
LL

Levitan, B. M. On the asymptotic behavior of the spectral function of a self-adjoint differential equation of the second order. Izvestiya Akad. Nauk SSSR. Ser. Mat. 16, 325-352 (1952). (Russian)

The asymptotic formula $\rho(\lambda) = 2\pi^{-1}\lambda^1 + o(\lambda^1)$, $\lambda \rightarrow +\infty$, obtained by Marčenko [see the second preceding review] for the spectral function is sharpened. Let for $\mu > 0$, $\sigma(\mu) = \rho(\mu^2)$, and define σ on the whole axis to be odd. It is shown that as $\mu \rightarrow +\infty$, uniformly in a , $\sigma(\mu+a) - \sigma(a) = 2\pi^{-1}\mu + O(\ln \mu)$, and $\mu^{-1} \int_{-\infty}^{\infty} [\sigma(v+a) + \sigma(v-a)] - 2\pi^{-1}v \, dv = O(1)$. If there is no negative spectrum and $h=0$ or $h=\infty$ (in the latter case u_h is the solution of $Lu + \lambda u = 0$ satisfying $u(\lambda, 0) = 0$, $u'(\lambda, 0) = \lambda^1$), and for $x \rightarrow \infty$, $|g(x)| ds = O(x^a)$, where $a > 0$, then $\sigma(\mu+a) - \sigma(a) = 2\pi^{-1}\mu + O(1)$ as $\mu \rightarrow +\infty$, uniformly in a .

E. A. Coddington (Los Angeles, Calif.).

USSR/Mathematics - Matrices

21 Jan 52

"Problem of Moments for J_p-Matrices," Ya. N.
Kazhdan

"Dok Ak Nauk SSSR" Vol LXIX, No 3, pp 329-332

Discusses certain questions of the problem of moments, which questions are connected with Jacobi matrices and their generalization, namely, regular J-matrices. The questions discussed were proposed by B. M. Levitan to the author. Utilizes Levitan's method which he developed in demonstrating the

Theorem regarding the expansion in eigenfunctions of self-adjoint differential eqs. Solves the power matrixial problem of moments which corresponds to the regular J-matrix. Submitted by Acad S. M. Bernstein 6 Dec 51.

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CIA-RDP86-00513R000929620009-4"

USSR/Mathematics - Eigenfunctions, Completeness, 21 MAR 52

"Completeness of Squares of Eigenfunctions,"
B.M. Levitan

"Dok Ak Nauk SSSR" Vol 83, No 3, pp 349-352

G. Borg (Acta Math., 81, 3-4, 265, 1950) demonstrates in connection with the study of the inverse Sturm-Liouville problem, a number of theorems concerning the completeness of the square of eigenfunctions. Levitan shows that certain of these theorems follow simply from the theory of operators of generalized displacement. Considers $q(x)$, a real function, summable in every finite interval and the

solvn of the Sturm-Liouville eq $y'' + (L-q(x))y = 0$ with certain initial condns. Submitted by
Acad S.N. Bernshteyn 21 Jan 52.

227T49

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr 1954)

<u>Name</u>	<u>Title of Work</u>	<u>Nominated by</u>
Levitin, B. N.	A cycle of work on the spectral properties of functions	Moscow Mathematical Society

SO: W-30604, 7 July 1994

Lerche, B. M. [Russian translation] Lektsii po funktsional'noj analiticheskoy teorii v zadaniyakh i zadachakh. (Lectures on functional analysis in problems and exercises) Izdatelstvo inostrannoj literatury, Moscow, 1953. 356 pp. 10.75 rubles.

In the preface of this book the author states that he does not intend to give a complete account of the theory of functions of a complex variable, but rather to present the basic concepts and methods of the theory of functions of a complex variable, and to illustrate them by examples.

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II. Procedure of investigation

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LEVITAN, B. M.

USSR/Mathematics - Integrals

May/Jun 53

"Concerning a Special Theorem of Tauber," B. M.
Levitan

Iz Ak Nauk SSSR, Ser Mat, Vol 17, No 3, pp 269-284

Proves the special Tauber theorem (with appraisal
of remainder), which permits obtaining of the
asymptotic behavior of the spectral function of
the self-conjugate eq in partial derivs. Received
8 Jul 52.

258T108

LEVITAN, B. M.

USSR/Mathematics - Asymptotic Behavior Jul/Aug 53

"Asymptotic Behavior of the Spectral Function of the Second-Order Self-Adjoint Differential Equation, and Expansion in Eigenfunctions," B. M. Levitan

Iz Ak Nauk SSSR, Ser Mat, Vol 17, No 4, pp 331-364

Studies the asymptotic behavior of the spectral function of subject eq given on the entire line or half-line. A special auxiliary means is the Tauber theorems and the evaluations of the remainders in these theorems, expounded in his earlier work (ibid. 16 [1952]). The asymptotic formulas obtained for the spectral function are applied to the study 274765

of the convergence of the eigenfunctions expansions.
Presented by Acad S. N. Bernshteyn, 29 Oct 52.

LEVITAN, B. M.

USSR/Mathematics - Asymptotic Behavior Sep/Oct 53

"The Spectral Function of the Equation $y'' + (\lambda - q(x))y = 0$ "

B. M. Levitan

Ak Nauk SSSR, Ser Mat, Vol 17, No 5, pp 473-484

Studies the asymptotic behavior of the spectral function of the equation $qy'' + (\lambda - q(x))y = 0$ given in an infinite interval. The obtained asymptotic under a certain relation supplements the asymptotic given earlier by the author. The main auxiliary means in this work is the general Tauber theorem of Norbert Wiener. Presented to the Acad S. N. Bernshteyn, 12 Nov 52.

274T71

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APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929620009-4"

USSR/Mathematics - Eigenfunction Expansions

1 May 53

"Expansion in the Eigenfunctions of the Equation $y''+[L-q(x)]y=0$," B. M.

Levitan

DAN
Dok. Akad. Nauk SSSR, Vol 90, No 1, pp 17-20

A study of the spectral function $\theta(x,y,L)$ of $y''+[L-q(x)]y=0$ given in the interval $(-\infty, \infty)$, where $q(x)$ is assumed to be real and summable in each finite interval and the solutions $f(x,L)$, $p(x,L)$ satisfy usual initial conditions (B. M. Levitan, Razlozheniya po Sobstvennym Funktsiyam, Expansion in Eigenfunctions, Moscow-Leningrad, 1950). Cites related work of V. A. Marchenko, Trudy Moskovskogo Matematicheskogo Obshchestva, 1, 327 (1952).

Presented by Acad S. N. Bernshteyn 3 Mar 53.

LEVITAN, B. M.

USSR/Mathematics - Eigenfunction
Expansion

11 May 53

"Expansion in Eigenfunctions of the Laplace
Operator," B. M. Levitan

DAN SSSR, Vol 90, No 2, pp 133-135

Considers the problem of finding: the eigen-
values m_i^2 of the system $\Delta u + m^2 u = 0$, $u|_B = 0$, where
B is the boundary of a certain finite domain
D of a N-dimensional Euclidean space; the cor-
responding functions $w_i(P)$ (P is a point of D);
and the spectral function of the Laplace oper-
ator. Presented by Acad S. N. Bernshteyn

3 Mar 53.

260T67

H. KLEIN, 6/14-

Levitan, B. M. On expansion in eigenfunctions of the
Laplace operator. Mat. Sb. N.S. 35(77) (1954). 267-
316. (Russian)

This paper contains the proofs of the results announced
by the author in Dokl. Akad. Nauk SSSR (N.S.) 90
(1953) 133-135; MR 15, 129.

E. A. Coddington (Copenhagen).

1 - F/W

SMB
post

Levitan, B. M. On expansion in eigenfunctions of the equation $\Delta u + q(x_1, x_2, x_3)u = 0$. Doklady Akad. Nauk SSSR (N.S.) 94, 179-182 (1954). (Russian)

Let q be a continuous real function defined on a finite simply-connected region D plus its boundary Γ in three-dimensional euclidean space E_3 . The eigenvalue problem $-\Delta u + qu = \lambda u$, $\partial u / \partial n = 0$ on Γ , is considered. If it has positive spectrum $\lambda_k = k^2$ with eigenfunctions ω_k , the spectral function θ is defined by

$$\theta(P, Q; \mu) = \sum_{n < \mu} \omega_n(P)\omega_n(Q),$$

where $P, Q \in D$. Several results are stated which describe the asymptotic behavior of θ as $\mu \rightarrow \infty$, and these can be used to prove the existence of a spectral function in all of E_3 which satisfies the same asymptotic relations. Next it is stated that (under certain conditions) the difference between the Riesz mean of order one of the expansion of a function in eigenfunctions of the given problem on $D \cup \Gamma$ and the Riesz mean of order one of the ordinary Fourier expansion tends to zero as $\mu \rightarrow \infty$. [Reviewer's note: It appears that either the formula just following (6) of the paper should read $\lim R_1(P; \mu) = 0$, $\mu \rightarrow \infty$, or else "first order" in the statement of the result should read "order 1".] (over)

62

SUBJECT USSR/MATHEMATICS, Funct.analysis CARD 1/2 PG - 72
AUTHOR LEVITAN B.M.
TITLE On the asymptotic behavior of the spectral functions and on the decomposition of a self-adjoint differential equation of second order II.
PERIODICAL Izvestija Akad. Nauk 19, 33-58 (1955)
reviewed 6/1956

The same questions are treated as in the author's paper (Izvestija Akad. Nauk 17, 331-364 (1953)). By an improved method several results could be precised. Let $\theta_h(x, s; \lambda)$ and $\theta_h^*(x, s; \lambda)$ be the spectral functions of the operators

$L[u] = u'' - q(x)u$ and $L^*[u] = u''$. The functions $u(x)$ are defined on $0 \leq x < \infty$.

Let be $u'(0) = hu(0) = 0$, h and $q(x)$ are real, $q(x)$ summable on every finite interval. Then the following theorems are valid:

1. $\lim_{\lambda \rightarrow +\infty} [\theta_h(x, s; \lambda) - \theta_h^*(x, s; \lambda)] = \theta_h(x, s; -\infty)$ holds uniformly in every finite region of variation of x and s . Especially herefrom follows

$$\lim_{\lambda \rightarrow +\infty} [\theta_h(0, 0; \lambda) - \frac{2}{\pi} \lambda^{\frac{1}{2}}] = \theta_h(0, 0; -\infty) - h.$$

2. Let be $f(x) \in L_2[0, \infty)$. Then for every finite interval of x uniformly holds

Izvestija Akad. Nauk 19, 33-50 (1955)

CARD 2/2 PG - 72

$$\lim'_{\lambda \rightarrow +\infty} \int_s^{\infty} f(s) \left[\theta_h(x, s; \lambda) - \theta_h(x, s, -\infty) - \frac{2}{\pi} \frac{\sin \lambda(x-s)}{x-s} \right] ds = 0,$$

i.e. the decomposition of $f(x)$ in terms of eigenfunctions of L converges and diverges at the same time with the decomposition of these functions in an ordinary Fourier integral in terms of cos-functions. The paper contains some misprints.

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CIA-RDP86-00513R000929620009-4

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929620009-4"

LEVITAN, B.M.

Expansion of Schrodinger's operators by the eigenfunctions in the
case of an independently increasing potential. Dokl.AN SSSR 103
no.2:191-194 Jl'55. (MIRA 8:10)

1. Artilleriyskaya inzhenernaya akademiya imeni F.E.Dzerzhinskogo.
Predstavлено академиком S.L.Sobolevym
(Operators (Mathematics))

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APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929620009-4"

LEVITAN, B.M.; SARGSYAN, I.S.

Theorem of the convergence of twice differentiated eigenfunction
expansion of the Sturm-Liouville operator. Izv. AN Arm. SSR, Ser.
FMET nauk 9 no. 3:3-15. '56. (MIRA 9:9)

1. Vozvannaya artilleriyskaya inzhenernaya akademiya imeni F.F.
Dzerzhinskogo i Moskovskiy gosudarstvennyy universitet imeni
M.V. Lomonosova.
(Convergence) (Operators (Mathematics))

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929620009-4

LEVITAN, B.; SARGSYAN, I.

Letter to the editor. Izv. AN Arm. SSR. Ser. FIZM Nauk 9 no. 7:105 '56.
(MLRA 9:11)

(Functions)

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CIA-RDP86-00513R000929620009-4"

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929620009-4

LEVITAN, B.M.

Some problems in spectral theory of self-conjugate differential
operators. Usp.mat.nauk 11 no.6:117-144 N-D '56. (MLRA 10,3)
(Functional analysis)

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